THE DISPATCH
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# Dugway Installs New Command Sgt. Major

**By Al Vogel**
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Command Sgt. Maj. Mauvet M. Rawls addresses the audience as the installation Command Sergeant Major of U.S. Army Dugway Proving Ground. Photos by Becki Bryant, DPG Public Affairs

A new Command Sergeant Major for Dugway Proving Ground (DPG) was officially installed March 18, 2021 during an Assumption of Responsibility ceremony at Dugway School. Command Sgt. Maj. Mauvet M. Rawls joins a long roster of Senior Noncommissioned Officers, since DPG's founding in 1942, with numerous responsibilities toward the Soldiers and civilians.

"I am here to provide input to the mission of the installation and the operation in the garrison setting," she wrote in a prepared statement. "This includes personnel, morale and welfare of all those who live and work on Dugway Proving Ground."

Command Sgt. Maj. Rawls came from Fort Hood, Texas, where she served as Command Sergeant Major at the Soldier Recovery Unit, formally known as the Warrior Transition Unit, and the interim Command Sergeant Major at the Carl R. Darnall Army Medical Center.

The highlight of the Assumption of Responsibility ceremony was the passing of the installation's colors from Sgt. Charles King of Dugway Chapel to Col. Scott Gould, Commander of DPG. Col. Gould then passed the colors to CSM Rawls, who then passed them to Sgt. King. Each passing signifies the trust and continuity among all ranks of Soldiers at DPG.

With the ceremony complete, Col. Gould addressed Command Sgt. Maj. Rawls while her husband Tony, and their children sat in the audience.

♦ Command Sgt. Maj. Page 2.

# Command Perspective

By Aaron D. Goodman
Garrison Manager, USAG, DPG

Flexibility and Perspective

If the pandemic and budget challenges have taught us anything, it is to remain flexible and keep an optimistic outlook. Perspective matters, not only for ourselves, but for the many others we work with and having a glass - half-empty viewpoint is counterproductive for everyone. That does not mean to forget about the challenges we face, but how we respond to them. Think about the fundamental aspects of leadership and influencing others. If we are negative and rigid, that has an impact on everyone and will certainly affect the outcome. On the other hand, if you approach a significant hurdle with a sense of purpose and goal of helping others get the most out of their gifts and abilities, you have a much greater chance of success.

For over a year now, we have worked tirelessly as a team and community to maintain the mission and support each other, while trying to remain safe and mitigate risk. Also, we have seen one of the most significant budget shortfalls in years, requiring complex analysis and creative thinking by everyone to cover essential services. None of these things comes lightly and we have had to adapt our strategy and how we work to keep the train moving in the right direction. Something as simple as reoccurring meetings and team huddles had to be adapted to keep everyone safe and yet maintain good communication. Also, much of our work requires close proximity to others to get the job done and we all found an effective way to work through those challenges.

The collective morale of our workforce and community has been challenged and it is great to see how everyone has responded. I believe it has brought out the best in everyone finding ways to help their neighbors and colleagues with everything from projects at the office to morale initiatives in the community. Encouraging each other to find creative solutions to our diverse challenges is what flexibility is all about. Also, keeping a can-do perspective is at our core as Army professionals. There is nothing we can't accomplish working together.

Keep up the amazing work you are all doing, as well as looking out for each other and being disciplined with our safety protocols to combat COVID. Remember, the glass being half full or half empty all depends on your perspective. Also, be willing to adjust your strategy where needed and encourage creativity at every opportunity to enable success and personal growth. We are Team Dugway and those four words should inspire confidence and the ability to accomplish any task if we work together.

## INSIDE YOUR DISPATCH

# New Command Sgt. Major . . .

During the Assumption of Responsibility ceremony, the installation colors were passed from Col. Scott D. Gould, Commander of Dugway Proving Ground, to Command Sgt. Maj. Mauvet M. Rawls, officially signifying her assumption of responsibility as the installation Command Sergeant Major.

Continued from page 1.

"You are now the backbone of Dugway," Col. Gould said. "As the Command Sergeant Major, you will find this role covers a wide breadth and depth of topics. You will find parts certainly challenging but it is highly rewarding. Your reputation of making a difference and creating positive impacts precedes you. I know you are the right Command Sergeant Major to assume the responsibility and continue building on the great work done previously."

The Assumption of Responsibility ceremony began with Chaplain (Maj.) Wesley Gornall offering a prayer for CSM Rawls: "May she continue the legacy of excellence that defines her past assignments, and may she put her own mark on Dugway."

Distinguished guests included Army Test and Evaluation Command Sgt. Maj. Ronald Graves, Installation Management Command Sgt. Maj. Daniel Dennison, and Adam Gardiner of Sen. Mitt Romney's office.

During her presentation, Command Sgt. Maj. Rawls remarked that everyone at DPG seemed very friendly and welcoming, which she found "refreshing."

"I feel privileged to be in this position and am ready to learn and explore in and out of uniform on and around Dugway," she said.

Command Sgt. Maj. Mauvet Rawls comes to Dugway Proving Ground with her husband Tony, a retired Soldier, and their two children.

# SOM Testing Gets Wheels

**By Becki Bryant**
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For the first time since arriving at Dugway Proving Ground (DPG) in February 2018, the Screening Obscuration Module (SOM) is undergoing testing in a mounted configuration atop a Humvee.

"It's exciting to see it get this far," said lead test officer Mike Capp. "Up until now, we had only tested the SOM in a dismounted configuration—usually it was sitting on the ground. Now it's mounted on top of a Humvee, driving along a road course marked with various targets."

The SOM is a mobile medium-area smoke-generating unit that is designed to increase Soldier protection levels of maneuver and platform survivability by degrading an enemy's ability to detect U.S. targets.

Testing at Dugway's West Desert Test Center (WDTC) has helped the SOM move from concept to production, providing valuable feedback to the manufacturer, L3Harris Technologies, and to the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense (JPEO-CBRND), who will ultimately get the capability into the hands of Warfighters.

"Based on the information gathered during testing at Dugway Proving Ground, we've had over 43 design changes to this year's model," shared Bruce Love, a test analyst that has been involved with the SOM project since early development. One of the key improvements was significantly decreasing the number of fasteners on the control panel from 23 to five. "That's a real impact that makes the unit easier to maintain and operate for our Warfighters," Love acknowledged.

This year, the SOM production model will undergo nearly 1,000 test trials at WDTC. Dismounted testing is nearly complete; mounted testing will continue through April. Testing often starts before sunrise when weather conditions are ideal. The dedication of the WDTC test team is not going unnoticed.

"I wanted to say thank you to all of you because it's the work you do that makes the difference," said LTC Alan Stephens, Joint Product Manager for Reconnaissance and Platform Integration, who visited Dugway Proving Ground to get a first-hand look at the SOM and personally applaud those who are involved in the test effort. "Your contributions are significant. Without you, the product can't get to the Warfighter," he said.

A Screening Obscuration Module (SOM) sits atop a Humvee at the start of a test trial at West Desert Test Center, Dugway Proving Ground. The mounted test trials, including cloud characterization, will continue through April. Photos by Becki Bryant, Public Affairs Office


The test team has a little fun and shows their passion for the Screening Obscuration Module (SOM) project. The SOM has been undergoing testing at Dugway's West Desert Test Center since February 2018, starting with the concept model and progressing to the production model.

## A SOM Show of Appreciation

The following employees were recently recognized by LTC Alan Stephens, Joint Product Manager for Reconnaissance and Platform Integration, for their work and dedication to the Screening Obscuration Module testing:

| | | | |
|---|---|---|---|
| Connie Brown | Josh Herron | Ethan Neilson | Alex Stillson |
| Mike Capp | Janica Kendall | Dan Ruth | Brittani Yale |
| Johnny Gallegos | John Kromack | Karl Scott | |

# DPG Moves to HPCON BRAVO

**By Becki Bryant**
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After nearly one year, Dugway Proving Ground transitioned to a lower health protection condition (HPCON) level, from Charlie (C) to Bravo (B) on March 22, 2021.

The move was made after careful consideration and assessment of key criteria: case counts, ICU capacity, the ability to test and the ability to trace COVID-19 in our areas of interest (Salt Lake, Davis, Utah and Tooele counties).

In addition to favorable measures, DPG Commander Col. Scott Gould said the community and workforce also played a key role. "For the past year, you have stuck to the mitigation measures we put in place to help keep Dugway safe through the pandemic," he said. "The move to a less restrictive health protection condition level would not have been possible without the continued focus and diligence by the workforce and community to stop the spread of the coronavirus."

Details of the transition were detailed in DPG Fragmentary Order (FRAGO) 11 to Operations Order (OPORD) 20-0006 Installation Preparedness and response to COVID-19 Outbreak. However, there were few changes that immediately went into effect with HPCON B, noted Mathew Adams, Plans & Operations Officer, who oversees the installation's response to COVID-19.

"Many of the less-restrictive HPCON services or protocols had already been implemented during HPCON Charlie," said Adams.

Examples include restarting takeout dining, the reopening of the fitness center, increased ridership in commuter vehicles, and allowing small gatherings up to 10 people.

DPG leaders will continue to assess the progress of COVID-19 vaccinations administered on base, as well as guidance from the Centers for Disease Control and Prevention before initiating even lighter protocols such as increased vehicle occupancy on post. Currently, commuting vehicles coming on or off post are limited to four people; all other vehicles on the installation are limited to two people.

"Please be patient," asked Col. Gould. "Your safety remains top priority and we do not want to make further changes until we feel it is safe to do so."

Roger Owen, a quality assurance specialist, receives a COVID-19 coronavirus immunization March 23, 2021 at Dugway Proving Ground. Civilian and Army medical personnel from the Dugway Health Clinic, a tenant unit from Fort Carson, Colorado, are giving the inoculations. As of April 5, 2021, 661 doses of the Moderna vaccine had been administered on base. Photos by Al Vogel, DPG Public Affairs

Wendell Williams, a program manager for Special Programs Division, receives a COVID-19 immunization March 23, 2021 at Dugway Proving Ground. Under HPCON B, those individuals who have ben fully vaccinated are not required to quarantine because of travel or exposure, unless experiencing COVID-19 symptoms.

**What's New**

Those individuals who have been fully vaccinated (defined as 14 days following administration of final dose) are not required to quarantine, unless experiencing COVID-19 symptoms.

- . This applies to exposure and travel-related quarantines.
  - Keep your vaccination card handy to ensure exceptions.
- Out-of-state visitors are authorized without exception, in accordance with DPG Access Control Policy 21-23, provided sponsors ensure full compliance with mask and distancing protocols while on base.
- Risk mitigation plans and exceptions to policy related to COVID-19 personal protocols for personal travel are delegated for approval as follows:
  - Garrison Staff and subordinate units have delegated approval to the Garrison Manager or acting Garrison Manager.
  - Tenant units have delegated approval to the organization's director/lead.
  - ATEC/WDTC staff and subordinate organizations have delegated approval authority to the Technical Director, Chief of Staff, and WDTC Director.

What Remains the Same

- Masks required – all individuals on post must wear a cloth facial covering at all times in all locations, including outdoor spaces while around others. Exceptions include inside one's home or individual office space, while eating/drinking, or as needed for security identification.
- On-post vehicle use remains limited:
  - All commuting vehicles, including private cars and rideshare vans, are still limited to four (4) occupants. Family members that live and commute together are counted as one (1) person. For example, if a father and son commute to DPG together, three (3) additional persons could ride in the vehicle.
  - All on-post vehicles used for purposes other than on- and off-base commuting remain limited to two (2) persons per vehicles.
- On-site dining venues are takeout only.
- Gatherings on the installation remain limited to 10 or fewer people.

# CHAPLAIN'S CORNER

**By Chaplain (MAJ) Wesley A. Gornall**

In the latter half of the 19th century, underground railroads were not a new thing. England had a subway as early as 1863. But there was a problem with coal driven trains running underground. Soot everywhere and the coal exhaust underground was an obvious health problem.

This is where Frank Sprague (1857-1934) and his electric motor comes into play here in America. He is credited with building the first subway in America, in Boston. Like me, you probably have never heard of Frank Sprague. He contributed to the development of the electric motor, electric railways and electric elevators. He was known as the "Father of Electric Traction."

Thomas Edison, for whom he used to work, said of his electric motor invention, "His is the only true motor." Doug Most explains: "What was unique about his version of the electric motor was that it produced no sparks. It could operate at constant speeds for long stretches whether it was pulling 20 pounds or 200 pounds."

As with anything that is new and contrary to the common sense of the day, the electric motor alone could not allay people's concerns. There was enormous fear in Boston of going underground. People associated "underground" with death. Man was not meant to travel underground. Newspaper headlines featured: "People leave the face of the earth." But on opening day, 250,000 people rode the Boston subway, and what was once frightening became a normal part of life.

On Dugway, as with subways, it takes courage and persistence to lead when people think "it's never been done that way." Our people are creative, innovative, and willing to think outside the box, making changes to be more effective and efficient. You are working to change our society for the better, so let me encourage you. Dare to go underground!

# A Tiny Piece of Dugway History

**By Rachel Quist**
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Dugway archaeologists sometimes find remnants of Soldiers' history on Dugway Proving Ground. This button is part of an Army issued sewing kit, likely dating to WWII or the early Cold War. Only the brass buttons, safety pins, and needles remain of the kit and are contained in a small scatter on the desert floor of one of the West Desert Test Center's large test grids.

Artifacts like this button are left where they are found, unless there is a specific reason to collect them, for example if they're in harm's way.

Under federal regulation, artifacts collected from federal land must be curated at an accredited repository. Dugway Proving Ground maintains an agreement with the Natural History Museum of Utah and any collected artifacts go to the museum. However, curating artifacts costs money and space is limited. So, in general, we leave artifacts where they are found. DPG maintains location data for its artifacts in case we need to revisit them.

# VIPs Pleased With Missile Alert System Test

**By Al Vogel**
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For some 10 years Army helicopters have had a system to warn the aircrew of missiles and small arms fire. For a number of years, these Missile Warning Systems (MWS), under the Army's Project Management Office for Aircraft Survivability Equipment (PMO-ASE), have been tested and upgraded at Dugway Proving Ground.

Recently, VIPs from PMO-ASE were invited to witness separate launches of two inert missiles, whose flights will add to the system's repertoire of data that warns the aircrew.

"This is one of the best places for us to do this kind of testing," said visiting Col. Kevin Chaney, Project Manager for PMO-ASE of Redstone Arsenal, Alabama. "It's operationally relevant, with the height of the mountains. It gives us the ability to put systems in there and try them all out."

Maj. Nathan Klein, visiting Assistant Program Manager for MWS, was pleased by the testing. "We're able to get all the test shots they're looking for," he said. "We're getting good data to take back and review, to analyze system performance."

The MWS is mounted on a tower, with the tower placed on a peak hundreds of feet above the launch site, miles away. The altitude and distance of the MWS replicate a helicopter in flight while an enemy missile is launched.

"We're testing the software against threats that the system wasn't tested against," said Derek Schumann, Project Test Officer for the Special Programs Division of DPG's West Desert Test Center.

In 2019, testing employed a missile simulator for the MWS sensors to detect. In 2020, MWS' sensitivity to small arms fire was tested. This year, it's identifying the threat of actual missiles.

"The more variables they can throw at it -- different missile types, angles of approach, time of flight and launcher configurations -- the smarter it becomes. The more effective it is at detecting fired enemy missiles, and warning the flight crew of the threat," said Schumann.

Because of Dugway's vastness (1,250 square miles) and controlled airspace, distance from launch to target is readily changed, creating more variables for MWS' data.

"The increased distance makes it harder to detect, but adds to the repertoire of data and may give flight crews extra time for evasive action," Schumann said.

Because missiles are expensive and in short supply, the Army isn't alone in its testing of a missile warning system – the Air Force, Navy, industry and foreign partners have also "piggybacked" onto the test with their own systems.

"Most of the systems under test are our (Army) systems, Col. Chaney said. "Our organization (PMO-ASE) is paying the big bill."

This year, 66 shot events are scheduled, 49 have been fired. Testing continued through March, and will resume this summer.

"This test highlights two great things about Dugway Proving Ground, said installation Commander Col. Scott Gould. "First, it demonstrates the unique geography of Dugway to meet specific conditions required by PMO-Aviation Survivability Equipment. More importantly, it highlights the collaboration and ingenuity of the entire Dugway Proving Ground team. It takes multiple divisions from the West Desert Test Center working in unison to make any test successful. Seeing our folks in action facilitating the test and ensuring it is successful is one of the things I most enjoy as the Commander."

Major figures in the tests and upgrading of the Missile Warning System (MWS) visited Dugway Proving Ground in early March. Left, sitting: Col. Kevin Chaney, Project Manager, Aircraft Survivability Equipment. Left, standing: Maj. Nathan Klein, Assistant Program Manager for MWS. Right: Col. Marcus A. Gengler, director of Aviation Enablers – Requirements Determination Directorate. Here, they are discussing a presentation they just watched about the MWS test. Photos by Al Vogel, Dugway Public Affairs


After the firing of a missile (which cannot be shown for security reasons), Commander of Dugway Proving Ground (right) discusses the test with (left) Derek Schumann, Project Test Officer for the Special Programs Division of DPG's West Desert Test Center; and Randy Gibson, Chief of Test Management for Special Programs Division.

# DPG Garrison moves from ID-S to ID-R

**By Becki Bryant**
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The U.S. Army Garrison (USAG) at Dugway Proving Ground (DPG) transitioned to a new command Directorate on March 17, 2021. USAG DPG moved from Installation Management Command's (IMCOM) Directorate – Sustainment (ID-S) to the IMCOM Directorate – Readiness (ID-R) portfolio of installations.

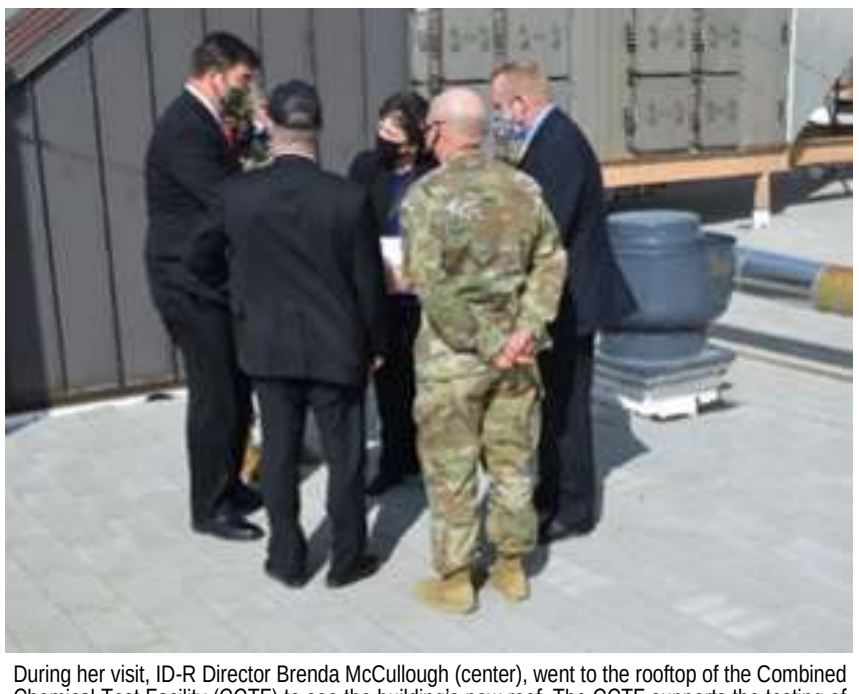
As part of the transition, the directors of both directorates visited DPG to better understand the installation and the support that the garrison provides. "It was a meaningful visit for them to see our facilities and programs and how we're taking care of mission support needs and our community," said Aaron Goodman, USAG DPG Garrison Manager.

The visit was also a good opportunity to address concerns such as the erosion of quality of life services, infrastructure sustainment funding in support of chemical and biological surety facilities, and the unique challenges that come with operating a remote and isolated installation.

"I believe the key benefit of the transition to ID-R will be the potential for resources to support quality of life initiatives and sustaining overall Garrison services," added Goodman.

Garrison employees are already looking into ID-R initiatives and exploring how they can provide additional benefits to Dugway Proving Ground. "We want to keep the momentum we had under ID-S and try to continually improve Dugway Proving Ground," he added.

The U.S. Army Garrison (USAG) at Dugway Proving Ground (DPG) recently transitioned to the IMCOM Directorate – Readiness (ID-R) portfolio of installations. ID-R Director Brenda McCullough visited DPG as part of the transition and toured many facilities including housing. Pictured here (front to back) ID-R Director Brenda McCullough, Installation Housing Manager Daniel Fitzpatrick, USAG DPG Garrison Manager Aaron Goodman and USAG DPG Public Works Director Doryl Lish. Photos by Becki Bryant, DPG Public Affairs Office



During her visit, ID-R Director Brenda McCullough (center), went to the rooftop of the Combined Chemical Test Facility (CCTF) to see the building's new roof. The CCTF supports the testing of protective clothing and masks, detectors and decontamination systems using chemical agents as challenge material. Getting a new roof for the 35,000-square-foot building was a top priority. Pictured here (clockwise from center) ID-R Director Brenda McCullough, Chemical Test Division Chief Dr. Chris Olson, DPG Commander Col. Scott Gould, Deputy Garrison Manager Chris Damour, Garrison Manager Aaron Goodman and Installation Command Sgt. Maj. Mauvet Rawls.

# IN A NUTSHELL

## Army Support of the COVID-19 Vaccination

What is it?
The Army's role in the COVID-19 fight includes medical research and development, protecting the people and maintaining readiness and supporting the Federal Vaccine Program nationwide.
The Army is administering the vaccination to Soldiers, Department of Army Civilians, Family members and contractors in accordance with the DOD Phase Vaccination Plan. The vaccine greatly reduces one's chance of getting the COVID -19 virus and greatly diminishes the virus' effects if infected. Receiving the vaccine is the first step to returning the nation to normal.

What are the current and past efforts of the Army?
The Army remains steadfast in its commitment to support the whole-of-government response to COVID-19 while continuing to defend the homeland.
The Army has developed and implemented systems and is using resources to conduct collective training at the platoon, company, battalion and brigade levels on Army installations. Training allows Soldiers to remain ready to fight and support the nation.

The Army is:

- Providing medical and support personnel to augment federal vaccination sites at the request of the Federal Emergency Management Agency (FEMA) to help with the whole-of-government response to COVID-19. Across the Department of Defense, more than 1,110 personnel have deployed to support vaccination sites nationwide at the request of FEMA.
- Ensuring that all personnel have the most up-to-date information on appropriate measures to prevent, test for, treat and control the spread of the virus.
- Army Senior Leaders, including the Senior Official Performing the Duties of Under Secretary of the Army, the Army Inspector General, the Army Surgeon General, Army Public Health Center officials, and the MEDCOM Command Sergeant Major participated in a virtual Town Hall on Feb. 22, 2021 to dispel rumors, provide factual information about the COVID-19 vaccine and urge Soldiers to get the shot.

What continued efforts does the Army have planned?
The Army and the Department of Defense will continue taking appropriate risk reduction, safety, and testing protocols to detect the threat of COVID-19 and demonstrate the ability to effectively monitor and respond to confirmed cases. The Army will continue to:

- Provide data on the efficacy and safety of the vaccines.
- Create awareness of the plan to increase the Soldiers' confidence in the vaccine and manage timeline expectations among Army audiences.

Why is this important to the Army?
Force health protection is a top priority for Army Senior Leaders. The COVID-19 vaccine protects Soldiers, their communities, and the nation and allows the Army to maintain unit readiness to deploy, fight, and win when called on by the nation. Healthy units are ready units.

Resources:
Army Medicine 24 hour COVID-19 Hotline: 1-800-984-8523
DSN 312-421-3700 | Overseas DSN (312) 421-3700 | Stateside Commercial: 210-295 -3700

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# THE DISPATCH

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# 3D Printing Boon for Test Fixture Development

**By Al Vogel**
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Frustrated by the inability of the SPiTFiRE test fixture to equally disseminate chemical agent vapor over the surface of fabric samples, Dr. Aaron Rogers of Dugway Proving Ground (DPG) pondered solutions.

The SPiTFiRE (Swatch Permeation Test Fixture, Reengineered) was better than previous test fixtures developed at DPG, but wasn't delivering the data quality the Air Force requires for the pilot stage of the Vapor Off-gassing Re-use Test (VORT).

The prototype Vapor Box created by 3D printing, containing 10 fabric swatches of different material. After the white top is bolted to the yellow bottom, chemical agent is introduced through a hole at the top, and exits via a similar hole on the other side of the "horseshoe," at the top. The swatches are then removed and placed in sealed, metal "cups" for their off-gas rate to be measured. Photo by Al Vogel, Dugway Public Affairs

The test will determine if chemically contaminated aircrew protective clothing off -gases fast enough to be safely worn again. A variety of fabrics, taken from actual aircrew protective clothing, will be tested. If off-gassing is safe, it will greatly reduce the distribution of new protective clothing and the money, effort, time and fuel used to get it to Airmen.

To apply chemical agent to fabric swatches equally, Project Scientist Rogers had an idea: put all 10 fabric samples in a Vapor Box that would expose all swatches to chemical agent at once.

The Vapor Box was Rogers' brainchild but, "The whole thing was made up by (West Desert Test Center's) Test Support Division, and (engineer) Greg Dahlstrom in particular," Rogers said.

The engineers used a 3D printer, with resin, to create the Vapor Box with recessed slots to hold 10 swatches of fabric. Agent enters and leaves via two holes at the top of a horseshoe-shaped exposure area. After contamination, each swatch is removed and put in individual sealed cups to monitor off-gassing.

Currently, the Air Force has invested $125,000 in the VORT pilot stage, which will run another three months.

"We successfully completed the first trial with the Vapor Box setup and it worked well," said Rogers. "However, we can't draw any conclusions about utility yet, since the sample size is too small. In early or mid-April we expect to do two more trials, which will give us a better indication of Vapor Box performance."

If the pilot is successful, test trials of up to two years will follow.

"If all goes well, and the design is a success, the full test effort will be funded," Rogers said.

The pilot stage will validate the Vapor Box in accordance with Department of Defense Instructions, Number 5000.61 (DODI 5000.61), the governing policy document for modeling and simulation.

"The use of swatches is considered a modeling system," Rogers said. "We build the prototype Vapor Box, then validate it according to the customer's test parameters."

If the first Vapor Box does not work as expected, another one will be 3D printed with the changes. 3D printing is cheaper, easier, faster and lighter than fabricating with stainless steel, the standard for decades.

3D printing provides a means of rapidly generating components for a test fixture to be used in actual testing and then when validated, produced from hardened material. The process of prototyping / validation is interactive, allowing the kinks to be worked out before spending greater money on a hardened material version made of stainless steel.

"This could be the beginning of a big change in fixture development," Rogers said. "We're always looking for more cost effective means (to create fixtures), because funding keeps drying up more and more."